## ARKANSAS STATE HIGHWAY AND TRANSPORTATION DEPARTMENT

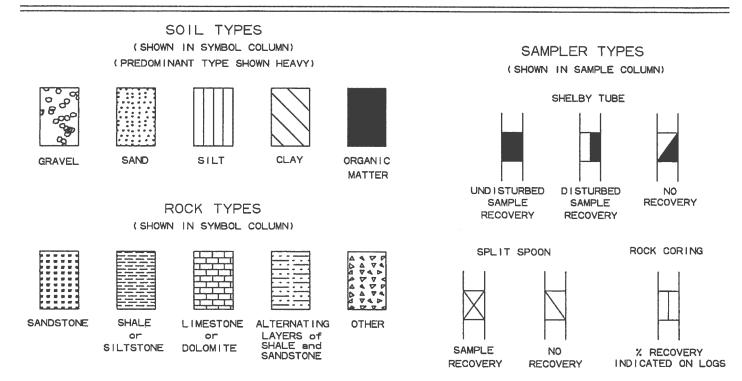


## SUBSURFACE INVESTIGATION

STATE JOB NO.		061450	
FEDERAL AID PROJEC	CT NO	STPE-ENHN(480)	
ARKANSAS	S TOURIST	ΓINFORMATION CENTER (SO	CIAL HILL) (S)
STATE HIGHWAY	30	SECTION	21
IN		HOT SPRING	COUNTY
LETTING OF		FEBRUARY 10, 2016	

The information contained herein was obtained by the Department for design and estimating purposes only. It is being furnished with the express understanding that said information does not constitute a part of the Proposal or Contract and represents only the best knowledge of the Department as to the location, character and depth of the materials encountered. The information is only included and made available so that bidders may have access to subsurface information obtained by the Department and is not intended to be a substitute for personal investigation, interpretation and judgment of the bidder. The bidder should be cognizant of the possibility that conditions affecting the cost and/or quantities of work to be performed may differ from those indicated herein.

## LEGEND



## TERMS DESCRIBING CONSISTENCY OR CONDITION

GRANU	LAR SOIL		CLAY	CL.	Y-SHALE		SHALE
'N' Value	Density	'N' Value	Consistency	'N' Value	Consistency	'N' Value	Consistency
0-4	Very Loose	0-1	Very Soft	0-1	Very Soft		
5-10	Loose	2-4	Soft	2-4	Soft	31-60	Soft
11-30	Medium Dense	5-8	Medium Stiff	5-8	Medium Stiff	Over 60	
31-50	Dense	9-15	Stiff	9-15	Stiff	More than	2'
Over 50	Very Dense	16-30	Very Stiff	16-30	Very Stiff	Penetrati	on
		31-60	Hard	31-60	Hard	in 60 Blow	vs: Medium Hard
		0ver 60	Very Hard	0ver 60	Very Hard	Less than	2'
						Penetrati	on
						in 60 Blow	vs: Hard

- 1. Ground water elevations indicated on boring logs represent ground water elevations at date or time shown on boring log. Absence of water surface implies that no ground water data is available but does not necessarily mean that ground water will not be encountered at locations or within the vertical reaches of these borings.
- 2. Borings represent subsurface conditions at their respective locations for their respective depths. Variations in conditions between or adjacent to boring locations may be encountered.
- 3. Terms used for describing soils according to their texture or grain size distribution are in accordance with the Unified Soil Classification System.

Standard Penetration Test – Driving a 2.0" O.D., 1-3/8" I.D. sampler a distance of 1.0 foot into undisturbed soil with a 140 pound hammer free falling a distance of 30 inches. It is customary to drive the spoon 6.0 inches to seat into undisturbed soil, then perform the test. The number of hammer blows for seating the spoon and performing the test are recorded for each 6 inches of penetration on the drill log. The field "N" Value (N<sub>f</sub>) can be obtained by

adding the bottom two numbers for example:  $\frac{6}{8-9} \Rightarrow 8+9=17 blows/ft$ . The "N" Value corrected to 60% efficiency (N<sub>60</sub>) can be obtained by multiplying N<sub>f</sub> by the hammer correction factor published on the boring log.

ARKANSAS HWY. & TRANS. DEPARTMENT  MATERIALS DIVISION - GEOTECHNICAL SEC.  BORING NO. 5  PAGE 1 OF 1															
JOB NO. 061450 Hot Spring County						PAGE 1 OF 1									
JOB NAME: Arkansas Tourist Information Center (Social Hill)							DATE: March 18, 2015  TYPE OF DRILLING: Hollow Stem Auger								
I-30					TTPE	OF D	KILLIN	u:	поі	10W S	stem	Aug	er		
					FOURDMENT. CME 45 w/ CME Automotic										
LOCA'					EQUIPMENT: CME 45 w/ CME Automatic										
			aymond Taylor		HAMMER CORRECTION FACTOR: NA										
			DEPTH: 20				, , , , , , , , , , , , , , , , , , , ,	51101	, , , , ,	310111		1171			
D		S						T							
E	S	A													
Р	Y M	М	DESCRIPTION OF MATERIAL	COTT				E	E	WS		%	%		
T	В	Р	DESCRIPTION OF MINTERIAL	SOIL GROUP		.:		IGH	CO	073		S	R Q		
Н	0	L		GROOT	L	ISI	اول	WE	ER	)FB	. 6-IN.	R	D		
FT.	L	E S	OUDEACE ELEVATION. 0444		PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	RY	LBS PER CU.FT	NO. OF BLOWS	PER 6				
111	NO N	3	SURFACE ELEVATION: 344.1  Moist, Very Stiff, Mottled Reddish Brown and		四口	%		Ω	1						
<b>-</b>		X	Gray Sandy Clay with Gravel (Quartz							9					
	8%		¬ Fragments) and some Organic Matter								- 1				
		X	\(Grassroots)							4-					
			Moist, Stiff, Mottled Reddish Brown and Gray							4-	°				
5		X	Clay with Sand and some Gravel (Quartz Fragments)							5					
	600		Moist, Stiff, Mottled Reddish Brown and Gray							5-	7				
	11	V	Clay with Gravel (Quartz Fragments)							_ 3					
			Moist, Stiff, Mottled Reddish Brown and Gray				:			4-	7				
			Clay with some Gravel (Quartz Fragments)							4					
10		$\triangle$	,							7-	В				
10	6 %		Maiet Head Matthed Deddiet Description							15	,				
	80.8	$\triangle$	Moist, Hard, Mottled Reddish Brown and Gray Clay with Gravel (Quartz Fragments)							21-	23				
<del> </del>	To S									11	,				
<del> </del>		X	Moist, Hard, Mottled Reddish Brown and Gray							25-					
			Clay with Sand and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and								- 1				
15		X	Gray Sand with Clay and Gravel (Quartz							13 28-	100000	l			
	57.70		Fragments)												
		X								15-					
	1897		Moist, Medium Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz					ĺ		15-	14				
	87.96		Fragments)							9					
20		X	1 agmonto)							9-1					
			Boring Terminated												
25															
25															
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35															
REMA	RKS	<u> </u>						l							

JOB NO. 081450 Hot Spring County JOB NAME: Arkansas Tourist Information Center (Social Hill) JOB NaME: Arkansas Tourist Information Center (Job Name: Information Center Name:					BORING NO. 6 PAGE 1 OF 1									
Arkansas Tourist Information Center (Social Hill) 1-30 STATION: LOCATION: LO														
STATION: LOCATION: LOCATIO	JOB NAME: Arkansas Tourist Information Center (Social Hill)													
LOGGED BY: Raymond Taylor   NAMER CORRECTION FACTOR: NA	1					EQUIPMENT: CME 45 w/ CME Automatic								
D S S A P M M P DESCRIPTION OF MATERIAL GROUP DISVAL SOIL GROUP DI				avmond Taylor		11444	ten (	CORRE	TION	1 11 4 6	TOD.		NIA	
DESCRIPTION OF MATERIAL  THE PART OF THE P		******				HAIVIN	) Man	ORRE	JHON	VEAC	TOR		NA	
E P Y M P T M P DESCRIPTION OF MATERIAL  SOIL GROUP  THE S SURFACE ELEVATION: 348.9  Moist, Stiff, Mottled Reddish Brown and Gray Clay with some Organic Matter (Grassroots)  Moist, Very Stiff, Mottled Reddish Brown and Gray Clay with Sand and Gravel (Quartz Fragments)  Moist, Hard, Mottled Reddish Brown and Gray Clay with Sand and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated											te to		Т	
Moist, Stiff, Mottled Reddish Brown and Gray Clay with some Organic Matter (Grassroots)  Moist, Very Stiff, Mottled Reddish Brown and Gray Clay with Gravel (Quartz Fragments)  Moist, Hard, Mottled Reddish Brown and Gray Clay with Sand and Gravel (Quartz Fragments)  Moist, Medium Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense to Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Wet, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated  3 3-3  3-3  3-3  3-3  3-3  3-3  4-5  5-7-9  9  23-30  6-10  6-10  6-10  6-10  7-9  6-10  7-9  6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  9  23-30  18  22-14  5-6-10  7-9  18  22-14  5-6-10  7-9  6-10  7-9  18  22-14  19  18  22-14  18  22-14  18  22-14  18  22-14  18  22-14  18  22-14  18  22-14  18  22-14  18  22-14  19  18  22-14  18  22-14  19  19  10  10  10  10  10  10  10  10	E P T H	Y M B O	AMPLH			PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	S C	R Q
Clay with some Organic Matter (Grassroots)  Moist, Very Sitff, Mottled Reddish Brown and Gray Clay with Gravel (Quartz Fragments)  Moist, Hard, Mottled Reddish Brown and Gray Clay with Sand and Gravel (Quartz Fragments)  Moist, Medium Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense to Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated												_		
Moist, Very Stiff, Mottled Reddish Brown and Gray Clay with Gravel (Quartz Fragments)  Moist, Hard, Mottled Reddish Brown and Gray Clay with Sand and Gravel (Quartz Fragments)  Moist, Medium Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense to Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Wet, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Wet, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated			Ä									- 1		
Moist, Hard, Mottled Reddish Brown and Gray Clay with Sand and Gravel (Quartz Fragments)  Moist, Medium Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense to Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Wet, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated  30  30  35	5		X								7-	9		
and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense to Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Wet, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated  6-10 6 25-38 15 19-21 16 23-31 Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated	10		X	Clay with Sand and Gravel (Quartz Fragments)							23- 18 22-	30 3 14		
Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Moist, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Wet, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated  15 19-21  16 23-31  Fragments)  Boring Terminated			X	and Gray Sand with Clay and Gravel (Quartz Fragments)							6-1 6	10	TO THE PERSON NAMED IN COLUMN 1	
Gray Sand with Clay and Gravel (Quartz Fragments)  Wet, Very Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated  23-31  24  36-35  Boring Terminated	15		X	Brown and Gray Sand with Clay and Gravel							19-	5 21		
Gray Sand with Clay and Gravel (Quartz Fragments)  Boring Terminated  36-35  Boring Terminated			X	Gray Sand with Clay and Gravel (Quartz Fragments)							23-	31		
25	20		X											
25 			- 11 to - 11 fc											
30 35		]		Boring Terminated										
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ARKANSAS HWY. & TRANS. DEPARTMENT MATERIALS DIVISION - GEOTECHNICAL SEC.  BORING NO. 7 PAGE 1 OF 1										
JOB NO. 061450 Hot Spring County	DATE: March 17, 2015									
JOB NAME: Arkansas Tourist Information Center (Social Hill)	TYPE OF DRILLING: Hollow Stem Auger									
STATION: LOCATION:	EQUIPMENT: CME 45 w/ CME Automatic									
LOGGED BY: Raymond Taylor	НАМ	ΛER (	CORRE	CTIO	N FA	CTOR	*	NA		
COMPLETION DEPTH: 20										
D S S A P M M P DESCRIPTION OF MATERIAL SOIL GROUP		ŭ		IGHT	LBS PER CU.FT.	NO. OF BLOWS		% S C	% R Q	
H O E S SURFACE ELEVATION: 349.0	PLASTIC LIMIT	% MOIST.	LIQUID	DRY WEIGHT	BS PER	O. OF I	PER 6-IN.	R	Ď	
Moist, Medium Stiff, Mottled Reddish Brown	교기	%	l u u	10		Z	1			
and Gray Clay with some Organic Matter (Grassroots)						3	-5			
Moist, Very Stiff, Mottled Reddish Brown and Gray Clay with Gravel (Quartz Fragments)						Training to	8			
Moist, Hard to Very Hard, Mottled Reddish Brown and Gray Clay with Sand and Gravel (Quartz Fragments)				1,77		22 1 24	3 -38 16 -43			
Moist, Very Stiff, Mottled Reddish Brown and Gray Clay with Sand						7-	5 ·11 <sup>=</sup>			
Moist, Dense, Mottled Reddish Brown and Gray Sand with Clay						8-	5 -23			
Moist, Very Dense to Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)						27 1 17	7 -32 16 -15 12			
Boring Terminated										
30										
35 REMARKS:										

ARKANSAS HWY. & TRANS. DEPARTMENT MATERIALS DIVISION - GEOTECHNICAL SEC.						BORING NO. 8 PAGE 1 OF 1									
JOB NO.	DATE: March 18, 2015														
JOB NAME: Arkansas Tourist Information Center (Social Hill)  1-30  TYPE OF DRILLING: Hollow Stem Aug									Aug	er					
STATION: LOCATION:		EQUIPMENT: CME 45 w/ CME Automatic													
	: R	aymond Taylor		HAMN	IER C	ORREC	CTION	J FAC	TOR:		NA				
	-	DEPTH: 20							71 011						
	s														
ES	A M P L E	DESCRIPTION OF MATERIAL SURFACE ELEVATION: 343.7	SOIL GROUP	PLASTIC LIMIT	% MOIST.	LIQUID LIMIT	DRY WEIGHT	LBS PER CU.FT.	NO. OF BLOWS	PER 6-IN.	% S C R	% R Q D			
		Moist, Medium Stiff, Mottled Reddish Brown													
	X	and Gray Clay with some Organic Matter _(Grassroots)						;	7-						
5	X	Moist, Very Stiff, Mottled Reddish Brown and Gray Clay with Gravel (Quartz Fragments)							11-						
	X	Moist, Very Stiff, Mottled Reddish Brown and Gray Clay with some Gravel (Quartz Fragments) Moist, Hard, Mottled Reddish Brown and Gray							12- 7	15					
10	$\stackrel{\triangle}{ imes}$	Clay with Sand and Gravel (Quartz Fragments)							16- 1 28-	3					
	X	Moist, Very Dense to Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)							19- 1	3					
									25- 8-	3					
	<u> </u>	Wet, Medium Dense, Mottled Reddish Brown and Gray Sand with Clay and Gravel (Quartz Fragments)							2	2					
20	$\langle \cdot \rangle$	Boring Terminated							'-	10					
		botting rominication													
30															
REMARKS	S:				<u></u>										